

CHRISTMAS CACTUS: BASAL STEM AND ROOT ROT

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Christmas cactus, *Zygocactus truncatus* Schum., is grown as a potted ornamental, primarily for its showy flowers which occur in a variety of colors. Its stems lack spines characteristic of the cactus family and its segments (phylloclades) lend themselves readily to vegetative propagation. As a foliage plant, it represents the greatest portion of the \$1.3 million annual sales of cacti in Florida (Dr. C. N. Smith, personal communication).

Phytophthora parasitica Dast. is the causal fungus of basal stem and root rot of Christmas cactus (1,3). It is one of the most destructive plant pathogens, attacking 72 genera in 42 families of flowering plants (4). *P. parasitica* is primarily a soil-borne pathogen affecting roots and crowns; however, it potentially is a serious foliage blighting fungus (2,3).

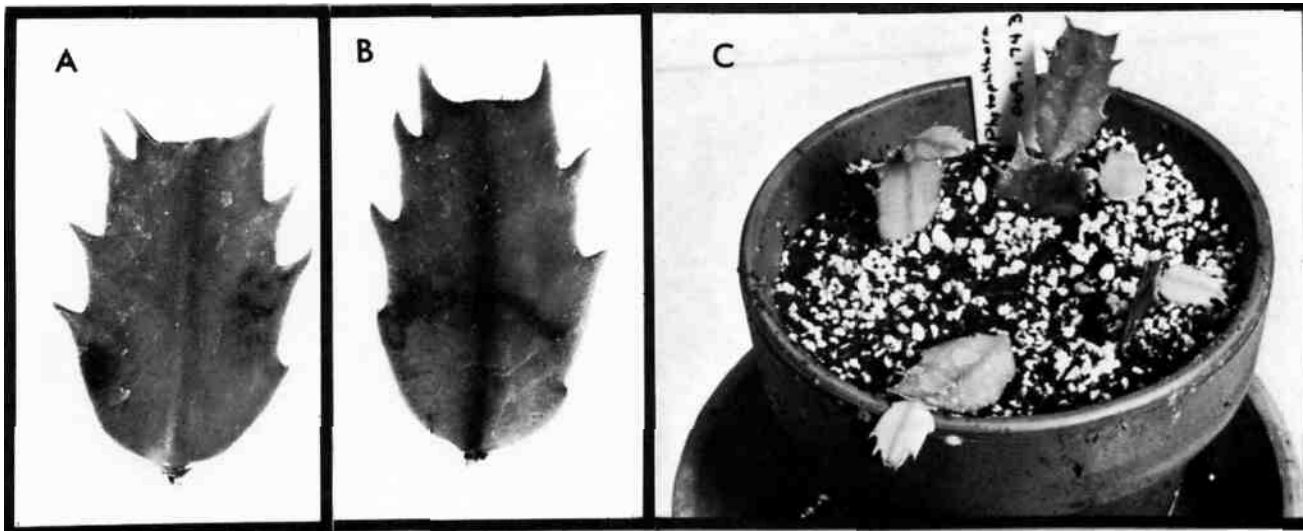


Fig. 1. Infection of Christmas cactus by *Phytophthora parasitica*, showing A) initial water-soaked spots on basal stem segment, B) advanced necrosis of basal stem segment with reddish brown margin, and C) abscission of terminal stem segments, lying on soil surface of pot.

SYMPTOMS. Stems of diseased plants appear lifeless, having a dull, grey-green color, and droop much more severely than the gracefully arched healthy stems. Following basal stem infection, 2 or 3 of the terminal segments may abscise. The basal stem rot, occurring at or just below the soil line, is water-soaked, rather firm, and frequently delimited by a wavy, faded reddish margin (fig. 1). Infected roots are brown, soft, water-soaked, and necrotic.

CONTROL. Effective control of this disease lies in the use of pasteurized soil, the prevention of soil infestation by the fungus, and/or the drenching (approximately 75 ml/4 inch pot) of soil with Dithane M-45 (80 WP) at the rate of 2.2 g/liter prior to planting or rooting (3). In addition, Knauss (5) has shown experimentally that Nurelle, although not yet registered for general use, has provided effective control of this disease when utilized as a drench.

Literature Cited

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